EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE SCOTT COVERED BRIDGE (BRIDGE NO. 45) OVER THE WEST RIVER. THE PROJECT IS LOCATED IN THE TOWN OF TOWNSHEND, AND SPANS BETWEEN VT ROUTE 30 AND THE INTERSECTION OF TH 4 AND TH 38. THE BRIDGE IS CURRENTLY CLOSED TO ALL TRAFFIC AND WILL REMAIN CLOSED DURING CONSTRUCTION. UPON COMPLETION OF THE REHABILITATION, THE BRIDGE WILL BE OPEN TO PEDESTRIAN TRAFFIC ONLY. THE PROJECT CONSISTS OF REPLACING DETERIORATED BRIDGE MEMBERS, INSTALLATION OF NEW SIDING, AND INSTALLATION OF A NEW STANDING SEAM METAL ROOF, CONSTRUCTION OF A NEW BACKWALL AND WINGWALLS AT ABUTMENT NO. 1, INSTALLATION OF TIMBER APPROACH RAILING AT THE WEST APPROACH, REGRADING OF THE WEST APPROACH AND REPAVING OF THE EAST APPROACH.

THE AREA OF DISTURBANCE SHOWN IN THESE PLANS WITHIN THE PROJECT VICINITY IS APPROXIMATELY 0.1 ACRES. EARTH DISTURBANCE FOR ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS IS ESTIMATED TO BE 0.4 ACRES. TOTAL AREA OF DISTURBANCE AS SHOWN ON THE EPSC PLAN IS APPROXIMATELY 0.5 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A VALLEY SOUTH OF THE TOWNSHEND DAM THAT IS WELL ESTABLISHED FOREST WITH BUSHES, SOFTWOODS AND HARDWOODS. VT ROUTE 30, STATE FOREST ROAD (TH 4) AND STONE ARCH WAY ARE ADJACENT TO THE PROJECT SITE. THERE ARE RESIDENCES TO THE WEST SIDE OF THE PROJECT WITH GRASS BUFFERS.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WEST RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. WEST RIVER IS A TRIBUTARY OF THE CONNECTICUT RIVER. THE PROJECT IS LOCATED APPROXIMATELY 0.4 MILES SOUTH OF THE TOWNSHEND DAM. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 282 SQUARE MILES. THE BANKS ARE HEAVILY VEGETATED OR EXPOSED LEDGE IN THE PROJECT VICINITY. THE STREAMBED CONSISTS OF SAND, GRAVEL, COBBLES AND LEDGE. THE WIDTH OF THE WEST RIVER IS HIGHLY VARIABLE AND IS APPROXIMATELY 150 FEET IN THE SPRING AND 100 FEET IN THE DRYER MONTHS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOODS TREES AS WELL AS UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY TEMPORARY CONSTRUCTION ACCESS, TREE TRIMMING AND SUBSTRUCTURE WORK. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE ONDAWA FINE SANDY LOAM, 0% TO 3% SLOPES, K = 0.14 TO 14.17 ON/HR, OCCASIONALLY FLOODED TO THE WEST AND RAWSONVILLE-HOGBACK FINE SAND LOAMS, 25% TO 50% SLOPES, K = 0.01 TO 6.00 IN/HR, ROCKY TO THE EAST.
NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WEST RIVER
WETLANDS: NO

HISTORIC DISTRICT AREA IS LIMITED TO THE DIRECT FOOTPRINT OF THE SCOTT COVERED BRIDGE. THERE ARE NO OTHER KNOWN HISTORICAL OR ARCHEOLOGICAL AREAS IDENTIFIED WITHIN THE PROJECT LIMITS. ENDANGERED SPECIES ARE KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT AND WITHIN THE LIMITS OF THE WEST RIVER. IN-STREAM WORK IS NOT PROPOSED IN THE RIVER AND NO IMPACT TO THE KNOWN STATE THREATENED SPECIES ARE EXPECTED.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

SOIL DISTURBANCE SHALL BE LIMITED TO THE SLOPE LIMITS AT ABUTMENTS NO. 1 AND NO. 2 AS DETAILED ON THE CONSTRUCTION CONDITIONS PLAN.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE CONSTRUCTION CONDITIONS PLAN OR USED AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCITON SITE.

THE DISTURBANCE AREA AT ABUTMENT NO. 1 IS AT A HIGHER ELEVATION THAN THE SURROUNDING LAND. THEREFORE, IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE CONSTRUCTION CONDITION PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

DUE TO THE NATURE OF THE REHABILITATION OF THE SCOTT COVERED BRIDGE, MINIMAL ROADWAY APPROACH WORK IS PROPOSED AND THERE WILL BE NO CHANGES TO THE IMPERVIOUS AREA OR INCREASED STORMWATER RUNOFF. THEREFORE, NO PERMANENT CONTROLS ARE USED.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

TEMPORARY MULCHING SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.
THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.
THE FOLLOWING REQUIREMENTS MUST BE ADHERED TO:
1. ENLARGED ACCESS POINTS STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
2. A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE.
3. IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, TWO ROWS OF SILT FENCE MUST BE INSTALLED ALONG THE CONTOUR.
4. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROZEN GROUND.
5. MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
6. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
- IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
- DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.

7. PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1 INCH THICKNESS.
8. USE STONE TO STABILIZE AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE 10—20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

SEDIMENT BASINS FOR SUBSTRUCTURE AND BACKWALL WORK ARE NOT ANTICIPATED TO BE USED SINCE THE DISTURBANCE AREA AT ABUTMENT NO. 1 IS AT A HIGHER ELEVATION THAN THE SURROUNDING LAND.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

REV. NO.	DATE:

RENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH.(802) 257-7585 FAX:(802) 257-7508

SHEET NAME: EPSC PLAN
PROJECT NAME: TOWNSHEND
PROJECT NO: STP SCTT (1)
DRAWN BY: CE
CHK'D BY:
DATE: 10/15/2015
SHEET NO. 1 OF 7

1.5 SEQUENCE AND STAGING

1.5.1a TEMPORAY BRIDGE SHORING INSTALLATION
CREATE LAYDOWN AND WORK AREA IN ADJACENT FIELD ON THE WEST SIDE
PDF FENCE, SILT FENCE AND STONE CHECK DAMS
ERECT TEMPORARY SHORING SYSTEM

1.5.1b WOOD STRUCTURE REHABILITATION
CONTAIN WOOD DEBRIS ON STAGING NO DEBRIS SHALL ENTER THE RIVER
CUT NEW PIECES IN STAGING AREA

1.5.1c ABUTMENT AND PIER WORK
ALL DEMO DEBRIS TO BE REMOVED FROM THE SITE
CONTAIN ALL SAND, CRACK REPAIR MATERIALS TO ABUTMENT/PIER WORK AREA
NO RAW CONCRETE SALL BE DEPOSITED IN THE RIVER BED

1.5.1d STONE FILL INSTALLATION
STONE FILL, GRUBING MATERIAL, SEED AND MULCH TO BE DONE IN THE DRY AT ABUTMENT 1

1**.5.1e FINAL EPSC ELEMNTS**
FINAL SEED, MULCH AND EROSION FABRIC IN SPRING 2016

1.5.2 OFF SITE ACTIVITIES
THE ENGINEERS OFFICE WILL BE ON A GRAVEL AREA NEXT TO THE BRIDGE ON STONE ARCH WAY
THE STAGING AREA WILL BE 207 STONE ARCH WAY AT THE BRIDGE SITE

1.6 CONTACT INFORMATION

1.6.1 ONSITE PLAN COORDINATOR
PRIMARY ONSITE PLAN CORDINATOR
SCOTT SARGENT 802-380-9495
15 YEARS OF HEAVY CONSTRUCTION EXPERIENCE AND EROSION
CONTROL IMPLEMENTATION AND INSPECTION

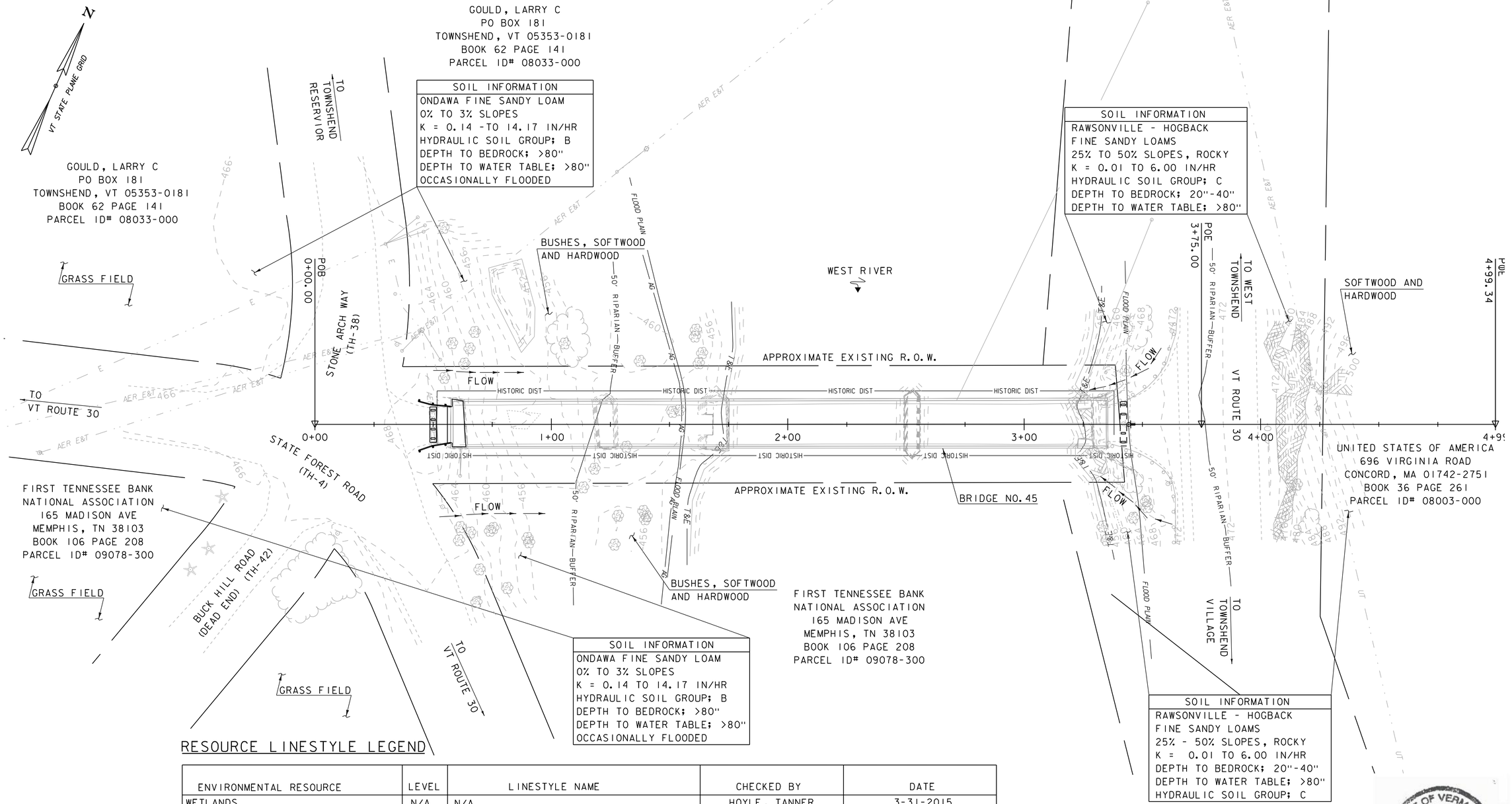
SECONDARY ONSITE PLAN CORDINATOR AND PIMARY PLAN PREPARER
CHARLIE EZEQUELLE 802-365-1944
15 YEARS OF HEAVY CONSTRUCTION EXPERIENCE WITH 5 YEARS
OF EPSC PLAN DEVELOPMENT, IMPLEMENTATION AND INSPECTION

SECONDARY PLAN PREPARER
RON BELL 603-363-9966

REV. NO.	DATE:

RENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH.(802) 257-7583 FAX.(802) 257-7308

SHEET NAME: EPSC PLAN
PROJECT NAME: TOWNSHEND
PROJECT NO: STP SCTT (1)
DRAWN BY: CE
CHK'D BY:
DATE: 10/15/2015
SHEET NO. 2 OF 7



RESOURCE LINESTYLE LEGEND

ENVIRONMENTAL RESOURCE	LEVEL	LINESTYLE NAME	CHECKED BY	DATE
WETLANDS	N/A	N/A	HOYLE, TANNER	3-31-2015
HISTORIC/HISTORIC DISTRICT	LAHD	HISTORIC DIST. —HISTORIC DIST—	HOYLE, TANNER	3-31-2015
ARCHAEOLOGICALLY SENSITIVE LAND	N/A	N/A	HOYLE, TANNER	3-31-2015
4F PROPERTY	N/A	N/A	HOYLE, TANNER	3-31-2015
6F PROPERTY	N/A	N/A	HOYLE, TANNER	3-31-2015
AGRICULTURAL LAND	LAAG	AGRICULT. LAND —AG— —AG—	HOYLE, TANNER	3-31-2015
FISH & WILDLIFE HABITAT	N/A	N/A	HOYLE, TANNER	3-31-2015
FLOOD PLAINS	LAFP	FLD. PLAINS —FLOOD PLAIN—	HOYLE, TANNER	3-31-2015
ENDANGERED SPECIES	LATE	THR. & END. SPEC. T&E —T&E—	HOYLE, TANNER	3-31-2015
HAZARDOUS WASTE	N/A	N/A	HOYLE, TANNER	3-31-2015
STORMWATER	N/A	N/A	HOYLE, TANNER	3-31-2015
GREEN MOUNTAIN NATIONAL FOREST LAND	N/A	N/A	HOYLE, TANNER	3-31-2015

SCALE: 1" = 20'-0"
20 0 20

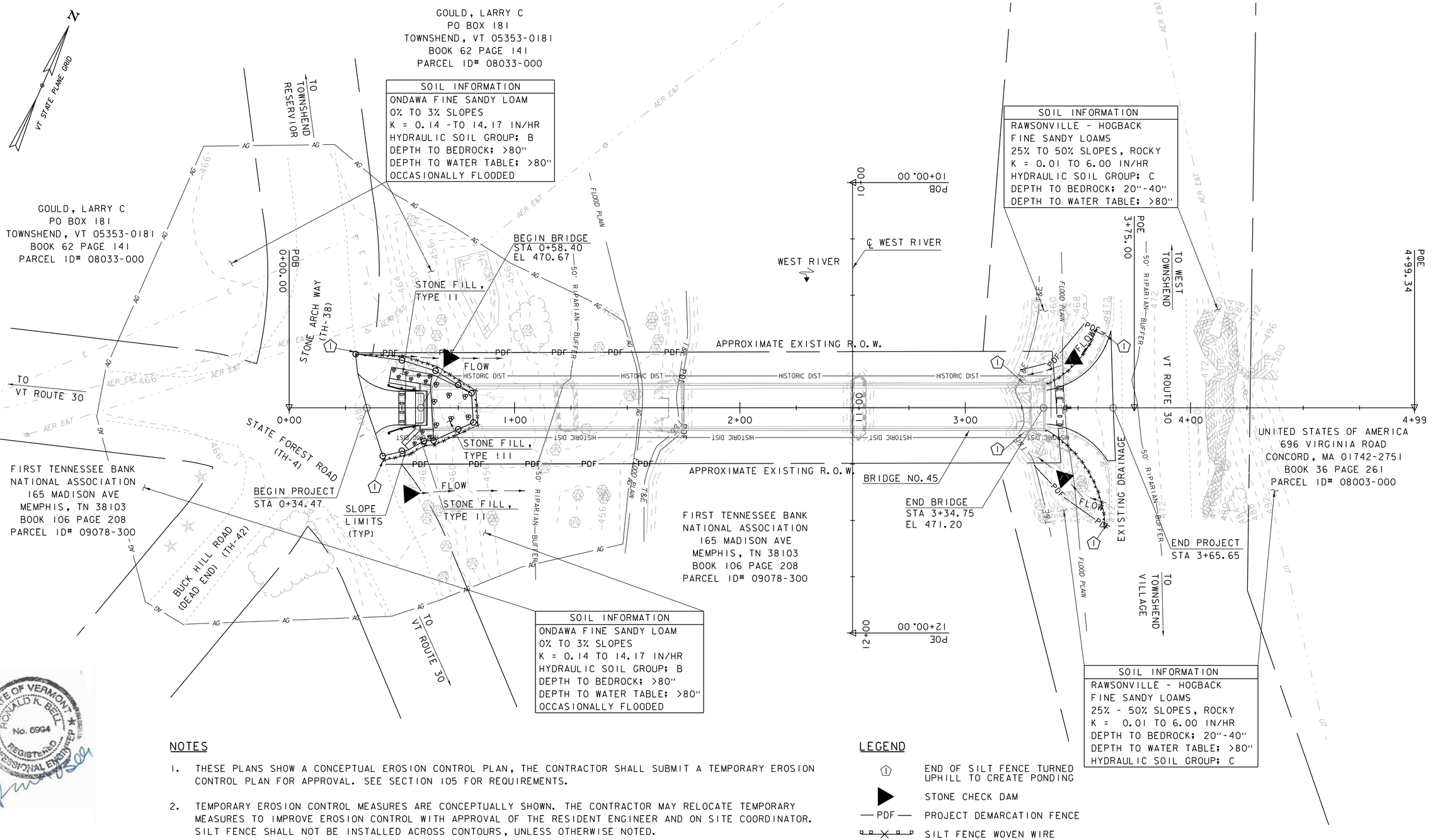
DATUM
VERTICAL NAVD 88(GEOID09) FT
HORIZONTAL NAD 83(CORS) sFT
ADJUSTMENT LSQ

STATE OF VERMONT
RONALD R. BELL
No. 6934
REGISTERED PROFESSIONAL ENGINEER

REV. NO.	DATE:

BRENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH.(802) 257-7583 FAX:(802) 257-7508

SHEET NAME: EPSC PLAN
PROJECT NAME: TOWNSHEND
PROJECT NO: STP SCTT (1)
DRAWN BY: CE
CHK'D BY:
DATE: 10/15/2015
SHEET NO. 3 OF 7



STATE OF VERMONT
RONALD K. BELT
No. 6994
REGISTERED PROFESSIONAL ENGINEER

DATUM

VERTICAL NAVD 88(GEOID09) FT

HORIZONTAL NAD 83(CORS) sFT

ADJUSTMENT LSQ

NOTES

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR SHALL SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL. SEE SECTION 105 FOR REQUIREMENTS.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO EPSC DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. REFER TO EPSC EXISTING SITE PLAN FOR DESCRIPTIONS OF LINE STYLE SYMBOLS.

LEGEND

- ① END OF SILT FENCE TURNED UPHILL TO CREATE PONDING
- STONE CHECK DAM
- PDF — PROJECT DEMARCATION FENCE
- SILT FENCE WOVEN WIRE
- TOE OF FILL SLOPE

SCALE: 1" = 20'-0"
20 0 20

REV. NO.	DATE:

RENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH. (802) 257-7583 FAX. (802) 257-7308

SHEET NAME: EPSC PLAN

PROJECT NAME: TOWNSHEND

PROJECT NO: STP SCTT (1)

DRAWN BY: CE | CHK'D BY: | DATE: 10/15/2015

SHEET NO. 4 OF 7

N

VT STATE PLANE GRID

GOULD, LARRY C
PO BOX 181
TOWNSHEND, VT 05353-0181
BOOK 62 PAGE 141
PARCEL ID# 08033-000

SOIL INFORMATION
ONDAWA FINE SANDY LOAM
0% TO 3% SLOPES
K = 0.14 -TO 14.17 IN/HR
HYDRAULIC SOIL GROUP; B
DEPTH TO BEDROCK; >80"
DEPTH TO WATER TABLE; >80"
OCCASIONALLY FLOODED

TO TOWNSHEND RESERVIOR

GOULD, LARRY C
PO BOX 181
TOWNSHEND, VT 05353-0181
BOOK 62 PAGE 141
PARCEL ID# 08033-000

TO VT ROUTE 30

STONE ARCH WAY (TH-38)

POB 0+00.00

BEGIN BRIDGE
STA 0+58.40
EL 470.67

STONE FILL, TYPE II

STONE FILL, TYPE III

FLOW

SLOPE LIMITS (TYP)

BEGIN PROJECT
STA 0+34.47

STATE FOREST ROAD (TH-4)

FIRST TENNESSEE BANK
NATIONAL ASSOCIATION
165 MADISON AVE
MEMPHIS, TN 38103
BOOK 106 PAGE 208
PARCEL ID# 09078-300

BUCK HILL ROAD (DEAD END) (TH-42)

TO VT ROUTE 30

50' RIPARIAN BUFFER

FLOOD PLAIN

AER E&T

HISTORIC DIST

APPROXIMATE EXISTING R.O.W.

SOIL INFORMATION
ONDAWA FINE SANDY LOAM
0% TO 3% SLOPES
K = 0.14 TO 14.17 IN/HR
HYDRAULIC SOIL GROUP; B
DEPTH TO BEDROCK; >80"
DEPTH TO WATER TABLE; >80"
OCCASIONALLY FLOODED

FIRST TENNESSEE BANK
NATIONAL ASSOCIATION
165 MADISON AVE
MEMPHIS, TN 38103
BOOK 106 PAGE 208
PARCEL ID# 09078-300

0+00 1+00 2+00 3+00 4+00 4+99.34

0+00 10+00 11+00 12+00

C WEST RIVER

WEST RIVER

BRIDGE NO. 45

END BRIDGE
STA 3+34.75
EL 471.20

POE 3+75.00

TO WEST TOWNSHEND VT ROUTE 30

EXISTING DRAINAGE

END PROJECT
STA 3+65.65

TO TOWNSHEND VILLAGE

UNITED STATES OF AMERICA
696 VIRGINIA ROAD
CONCORD, MA 01742-2751
BOOK 36 PAGE 261
PARCEL ID# 08003-000

SOIL INFORMATION
RAWSONVILLE - HOGBACK
FINE SANDY LOAMS
25% TO 50% SLOPES, ROCKY
K = 0.01 TO 6.00 IN/HR
HYDRAULIC SOIL GROUP; C
DEPTH TO BEDROCK; 20"-40"
DEPTH TO WATER TABLE; >80"

CONTOURS RELECT EXISTING CONDITIONS,
SEE CROSS SECTIONS FOR FINAL GRADING.

LEGEND

- DENOTES DISTURBED AREAS REQUIRING RE-VEGETATION. USE 4" OF TOPSOIL, HAY MULCH AND SEED
- TEMPORARY EROSION CONTROL MATTING
- STONE FILL

STATE OF VERMONT
RONALD K. BELL
No. 6934
REGISTERED PROFESSIONAL ENGINEER

DATUM

VERTICAL NAVD 88(GEOID09) FT

HORIZONTAL NAD 83(CORS) sFT

ADJUSTMENT LSQ

SCALE: 1" = 20'-0"
20 0 20

REV. NO.	DATE:

RENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH.(802) 257-7583 FAX:(802) 257-7308

SHEET NAME: EPSC PLAN

PROJECT NAME: TOWNSHEND

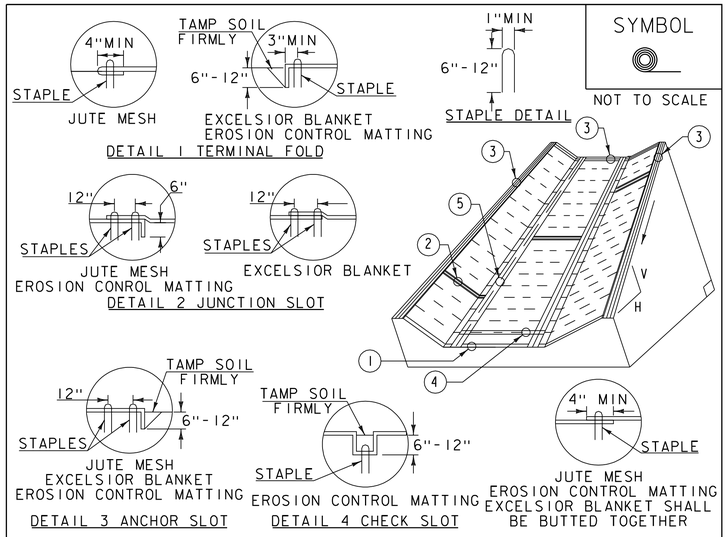
PROJECT NO: STP SCTT (1)

DRAWN BY: CE

CHK'D BY:

DATE: 10/15/2015

SHEET NO. 5 OF 7



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

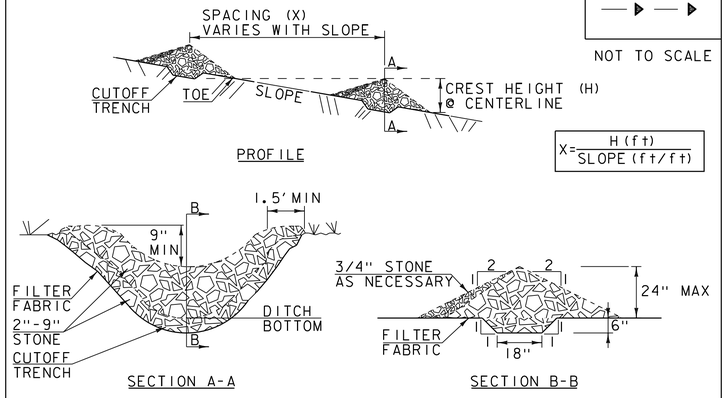
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50′ ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25′.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2′ APART AND IN ROWS APPROXIMATELY 3′ APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4′X225′ ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4′X150′ ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) ~~OR PERMANENT EROSION MATTING (PAY ITEM 653.21).~~

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

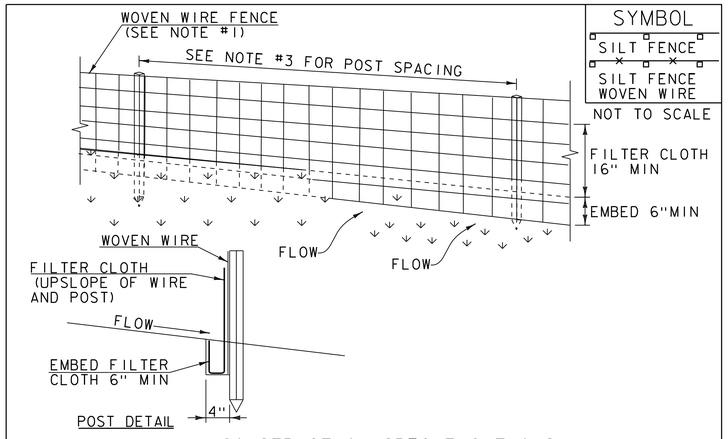
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5′ BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



SYMBOL
SILT FENCE
SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100′ UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10′ MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4′ AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6′.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

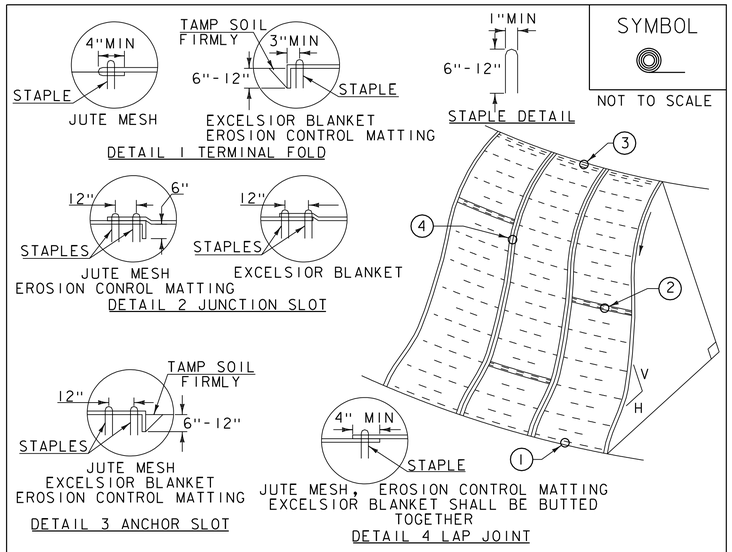
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR ~~GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR~~ GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

REV. NO.	DATE:

BRENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH. (802) 257-7583 FAX: (802) 257-7308

SHEET NAME: EPSC PLAN
PROJECT NAME: TOWNSHEND
PROJECT NO: STP SCTT (1)
DRAWN BY: CE
CHK'D BY:
DATE: 10/15/2015
SHEET NO. 6
OF 7



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) ~~OR PERMANENT EROSION MATTING (PAY ITEM 653.21).~~

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

VAOT LOW GROW/FINE FESCUE MIX						
	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

GENERAL AMENDMENT GUIDANCE		
FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

CONSTRUCTION GUIDANCE

1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JANUARY 12, 2015	WHF

REV. NO.	DATE:

BRENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT., 05354
PH.(802) 257-7583 FAX:(802) 257-7308

SHEET NAME: EPSC PLAN

PROJECT NAME: TOWNSHEND

PROJECT NO: STP SCTT (1)

DRAWN BY:	CHK'D BY:	DATE:
CE		10/15/2015

SHEET NO. 7 OF 7